



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

5

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/624,638 | 07/23/2003 | Takeshi Hamada | 240570US3 | 6891 |

22850 7590 12/07/2004

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

| |
|----------|
| EXAMINER |
|----------|

PAHNG, JASON Y

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

3725

DATE MAILED: 12/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/624,638

Applicant(s)

HAMADA ET AL.

Examiner

Jason Y Pahng

Art Unit

3725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/23/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: In page 10, lines 12-14, it is not understood how a first chamber which has a volume is comprised by a first area, a second area, and a third area. Volume cannot be comprised by area. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 11 are totally informal. In general, the claims are of such an informal and poor nature as to constitute a totally non-statutory definition of the invention. The claims require total redrafting to be put in proper form. The following are some examples.

Claims 1 and 11 are totally aggregative in nature. The claims are mere lists of elements without enough cooperative relationships among claimed elements. The claims lack essential structural and functional details.

Art Unit: 3725

With regard to claims 1 and 11, there is no antecedent basis for "the inner periphery" (line 4), "the inlet" (claim 1, line 17; claim 11, lines 9 and 10), and "the outlet" (claim 11, line 14).

With regard to claim 1, the determination of the path of material is critical to the understanding of the invention, but there is not enough structure to understand the flow of the material at all.

With regard to claims 1 and 11, the structure of the "a stationary concave liner" in line 2 is not clear and unnecessarily confusing. The stationary liner according to Figure 1 is not concave. Therefore, the word "concave" is misleading. It is suggested that the phrase be changed to, "a stationary liner with a tubular shape."

With regard to claims 1 and 11, the inner periphery of the concave liner in line 4 is not understood because there is no structural description of the stationary liner.

With regard to claims 1 and 11, it is not clear as to how a crushing chamber is formed between the stationary liner and the mantle liner because there is no structure at all given to the stationary liner and the mantle liner.

With regard to claim 1, it is not clear how a first area surface in line 9 has a length T or T multiplied by a square root of 2. How does an area have a predetermined length?

With regard to claim 1, it is not clear how a first tapered surface (line 19) has a length, and how a second tapered surface (line 23) has a length.

Art Unit: 3725

With regard to claim 1, the phrases, "to form a first area" (line 10), "to form a second area" (line 13), and "to form a third area" (line 15) are not understood. Does this mean that the first area is equal to the first area surface?

With regard to claim 1, the phrases, "a second area surface extending inclining outward" (line 12), and "a third area surface extending inclining further outward" (line 14) are totally not understood. It is not understood which element the second or third area surface is extending from. The words, "inclining" and "outward," are relative terms and are not understood.

With regard to claim 1, the phrase, "a third tapered surface having an inclination angle of 45 to 50 degrees," is not clear. It is not understood which surface the inclination is compared to.

With regard to claim 1, the phrase "of a" in lines 19 and 23 are not understood.

With regard to claim 11, the phrase, "to the horizontal plane" (lines 10 and 15) is not understood because there is no relationship defined between the cone crusher and the horizontal plane.

With regard to claim 11, it is not clear how the first area, the second area, and the third area are defined.

With regard to claim 11, there is no antecedent basis for "the crushing surface" in lines 9, 13, and 18.

With regard to claims 3-6, it is not clear how an area has a length.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-12, as well as can be understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Savolainen (US 6,581,860). Savolainen discloses a cone crusher with a "stationary concave liner" or a second crushing head (3) and a "mantle liner" or a first crushing head (2).

With regard to claims 1 and 11, all the limitations are found in the shape of Savolainen's first crushing head (2) and second crushing head (3). For example, it is inherent that the first crushing head (2) has a first area surface. Furthermore, many different angles can be found in the first crushing head (2) and the second crushing head (3).

With regard to claim 2-10, the limitations of each claim are disclosed by Savolainen. Savolainen's "stationary concave liner" (3) or "mantle liner" (2) can be expressed in innumerable areas and innumerable angles. Therefore, the limitations of each claim are disclosed by Savolainen.

For example, with regard to claims 2, Savolainen discloses various surfaces, including surfaces such as a third tapered surface. Furthermore, Savolainen discloses various angles, including angles such as 2 degree or 3 degrees.

Art Unit: 3725

For another example, with regard to claim 3, Savolainen discloses various surfaces, including surfaces such as a second area surface and a third area surface, both with a predetermined length, such as T.

With regard to claim 12, various angles, including angles such as 90 degree, 57 degree, and 62 degree, are inherently present in the "stationary concave liner" or the second crushing head (3).

Conclusion

In conclusion, it appears that none of the claims define a complete shape of the "stationary concave liner" or the "mantle liner." Each claim appears to define only a portion of a cone crusher. However, many cone crushers have such a portion.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Y Pahng whose telephone number is 571 272 4522. The examiner can normally be reached on 9:00 AM - 7:00 PM, Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allen Ostrager can be reached on 571 272 4521. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3725

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JYP



ALLEN OSTRAGER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700